

**CLAIMS**

1 1. A coiled spring battery contact for use in a battery compartment, wherein said contact  
2 is constructed and arranged such that only an battery terminal contact point contacts an  
3 abutting a terminal of a battery installed in the battery compartment, wherein said contact  
4 point is defined by a minimal surface area of an upper end turn of the contact.

1 2. The coiled spring contact of claim 1, wherein said coiled spring contact comprises a  
2 lower end turn, said upper end turn, and a plurality of concentric windings disposed  
3 therebetween, wherein said upper end turn is configured to form said terminal contact  
4 point.

1 3. The coiled spring contact of claim 1, wherein said battery terminal contact point is  
2 one of a plurality of battery terminal contact points formed on said upper end turn of said  
3 coiled spring contact.

1 4. The coiled spring contact of claim 1, wherein said upper end turn terminates at a  
2 distal end configured to have a lead attached thereto.

1 5. The coiled spring contact of claim 2, wherein said plurality of windings have varying  
2 diameters.

1 6. The coiled spring contact of claim 5, wherein said diameters are larger toward said  
2 lower end turn and smaller toward said upper end turn.

1 7. The coiled spring contact of claim 1, wherein said upper end turn has formed therein  
2 a hairpin turn the apex of which forms said terminal contact point.

1 8. The coiled spring contact of claim 2, wherein said coiled spring contact has an axis

2 of rotation defined by said windings, and wherein said terminal contact point is laterally  
3 offset from said axis in a first direction.

1 9. The coiled spring contact of claim 8, wherein said lateral offset causes regions of  
2 said windings in said first lateral direction to compress more than other regions of said  
3 windings when subject to a compression force applied by an installed battery to cause  
4 said terminal contact point to shift further in said first lateral direction.

1 10. A coiled spring contact for use in a battery compartment to contact a terminal of a  
2 battery installed in the battery compartment, wherein said coiled spring contact is  
3 constructed and arranged with an upper end turn configured such that a minimum surface  
4 area of said upper end turn contacts the installed battery.

1 11. The coiled spring contact of claim 10, wherein said minimum surface area of said  
2 upper end turn defines a terminal contact point, wherein said coiled spring contact  
3 comprises a plurality of concentric windings contiguous with said upper end turn,  
4 wherein said windings define an axis of rotation and wherein said battery terminal contact  
5 point is laterally offset from said axis of rotation.

1 12. The coiled spring contact of claim 11, with said coiled spring contact further  
2 comprises a lower end turn contiguous with said windings and said upper end turn,  
3 wherein said lower end turn is configured to be attached to said battery compartment.

1 13. The coiled spring contact of claim 11, wherein said windings of said coiled spring  
2 contact have a diameter such that said coiled spring contact has a conical shape..

1 14. The coiled spring contact of claim 11, wherein said upper end turn has formed  
2 therein a hairpin turn oriented such that an apex of said hairpin turn forms said terminal  
3 contact point.

1 15. The coiled spring contact of claim 11, wherein said upper end turn has a minimal  
2 radius of curvature and is formed with a bend forming an apex facing into the battery  
3 compartment, wherein said apex forms said terminal contact point.

1 16. The coiled spring contact of claim 11, wherein regions of said windings in said  
2 lateral direction compress more than other regions of said windings when said coiled  
3 spring contact is subjected to a compression force applied by an installed battery to cause  
4 said terminal contact point to shift an additional distance in approximately said lateral  
5 direction, thereby scraping any insulating contaminant layer disposed on the battery  
6 terminal

1 17. The coiled spring contact of claim 11, wherein said battery terminal contact point is  
2 one of a plurality of eccentric battery terminal contact points formed on said upper end  
3 turn of said coiled spring contact.

1 18. The coiled spring contact of claim 10, wherein said upper end turn terminates at a  
2 distal end configured to have an electrical lead attached thereto.

1 19. A battery compartment comprising:  
2 a housing configured to receive one or more batteries; and  
3 a coiled spring contact having a lower end turn secured to an interior of the housing,  
4 an upper end turn for contacting a terminal of an installed battery, and a plurality of  
5 concentric windings disposed between said upper and lower end turns, with said upper  
6 end turn forming a forward-most eccentric terminal contact point to contact a terminal of  
7 a battery installed in the housing.